

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- REVISED

PERMITTEE

Lake Forest Hospital
Attn: Roger Wojtowicz
660 North Westmoreland
Lake Forest, Illinois 60045

Application No.: 99110100

I.D. No.: 097080AAC

Applicant's Designation: 2X2000KW

Date Received: August 1, 2005

Subject: Hospital

Date Issued: December 29, 2005

Expiration Date: November 20, 2007

Location: 660 North Westmoreland, Lake Forest

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of three natural gas-fired boilers (one with a distillate fuel oil as back-up), four natural gas-fired engine/generators, two emergency diesel engine/generators and small boilers pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., less than 100 tons/year for nitrogen oxides (NO_x)), as further described in Attachment A. As a result, the source is excluded from requirements to obtain a Clean Air Act Permit Program permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permit(s) issued for this location.
2. This permit is issued based on the two boilers not being subject to New Source Performance Standard (NSPS) for Small Industrial - Commercial - Institutional Steam Generating Units, 40 CFR 60, Subpart A and Dc as being constructed before June 9, 1989.
3. Operation and emissions of the boilers and engine/generators shall not exceed the following limits:
 - a. Boilers

Natural gas usage: 40 mmscf/month, 320 mmscf/year

<u>Pollutant</u>	Emission	Emissions	
	Factor (Lb/mmescf)	(Tons/Mo)	(Tons/Yr)
Nitrogen Oxides (NO _x)	100	2.0	16.0
Carbon Monoxide (CO)	84	1.7	13.4
Volatile Organic Materials (VOM)	5.5	0.1	0.9
Particulate Matter (PM)	7.6	0.2	1.2

b. Natural gas-fired engine/generators

Operating engine-hours (total): 12,000 engine-hours/year

<u>Pollutant</u>	Emission	Emissions (total)	
	Factor (Lb/eng-hr)	(Lbs/Hr)	(Tons/Yr)
Nitrogen Oxides (NO _x)	8.7	34.8	52.2
Carbon Monoxide (CO)	4.0	16.0	24.0
Volatile Organic Materials (VOM)	2.0	8.0	12.0

c. Emergency diesel engine/generators

Operating engine-hours (each): 500 engine-hours/year

<u>Pollutant</u>	Emission	Emissions (total)	
	Factor (Lb/eng-hr)	(Lbs/Hr)	(Tons/Yr)
Nitrogen Oxides (NO _x)	55.85	111.7	27.9
Carbon Monoxide (CO)	2.70	5.4	1.4
Volatile Organic Materials (VOM)	0.69	1.4	0.4
Particulate Matter (PM)	0.45	0.9	0.2
Sulfur Dioxide (SO ₂)	6.88	13.4	3.4

- d. Pursuant to 35 Ill. Adm. Code 214.122(b)(2) and 214.304 at the above location, the Permittee shall not utilize in the boilers and engines a distillate fuel oil (Grades No. 1 and 2) with a sulfur content greater than the 0.3 weight percent.

These limits are based on the maximum boilers operations and engine manufacturers' and standard emission factors given by AP-42. Compliance with annual limits shall be determined on a monthly basis from a running total of 12 months of data.

4. The Permittee shall maintain records of the following items:

- a. Natural gas usage (mmescf/month and mmescf/year) separately for boilers and engines.
- b. Fuel oil usage (gallons/month and gallons/year) separately for boilers and engines.

- c. Hours of operation for each engine (hours/month and hours/year).
5. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five years from the date of entry and shall be made available for inspection and copying by the Illinois EPA and USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.
6. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
7. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
1340 North Ninth Street
P.O. Box 19276
Springfield, IL 62794-9276

and one (1) copy shall be sent to the Illinois EPA regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control - Regional Office
9511 West Harrison
Des Plaines, Illinois 60016

It should be noted that this permit has been revised to include operation of two diesel engine/generators.

If you have any questions on this, please call Valeriy Brodsky at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:VJB:psj

cc: Illinois EPA, FOS Region 1
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emission from the hospital operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such source. This is combustion of 250 mmscf of natural gas and 100,000 gallons of fuel oil in the boilers, 12,000 hours of combined cogeneration system engines operation and 500 hours per year of emergency generators operation. The resulting maximum emissions are below 100 tons per year of NO_x at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that material is handled, and control measures are more effective than required in this permit.

<u>Emission Units</u>	E M I S S I O N S				
	<u>NO_x</u>	<u>SO₂</u>	<u>CO</u>	<u>PM</u>	<u>VOM</u>
The Boilers (Gas Firing Mode)	16.0	--	13.4	1.2	0.9
The Boilers (Fuel Oil Firing Mode)	1.0	2.1	---	---	---
Three Natural Gas Engine/Generators	52.2	---	24.0	---	12.0
Two Diesel Engine/Generators	<u>27.9</u>	<u>3.4</u>	<u>1.4</u>	<u>0.2</u>	<u>0.4</u>
Total	97.1	5.5	38.8	1.4	13.3

DES:VJB:psj